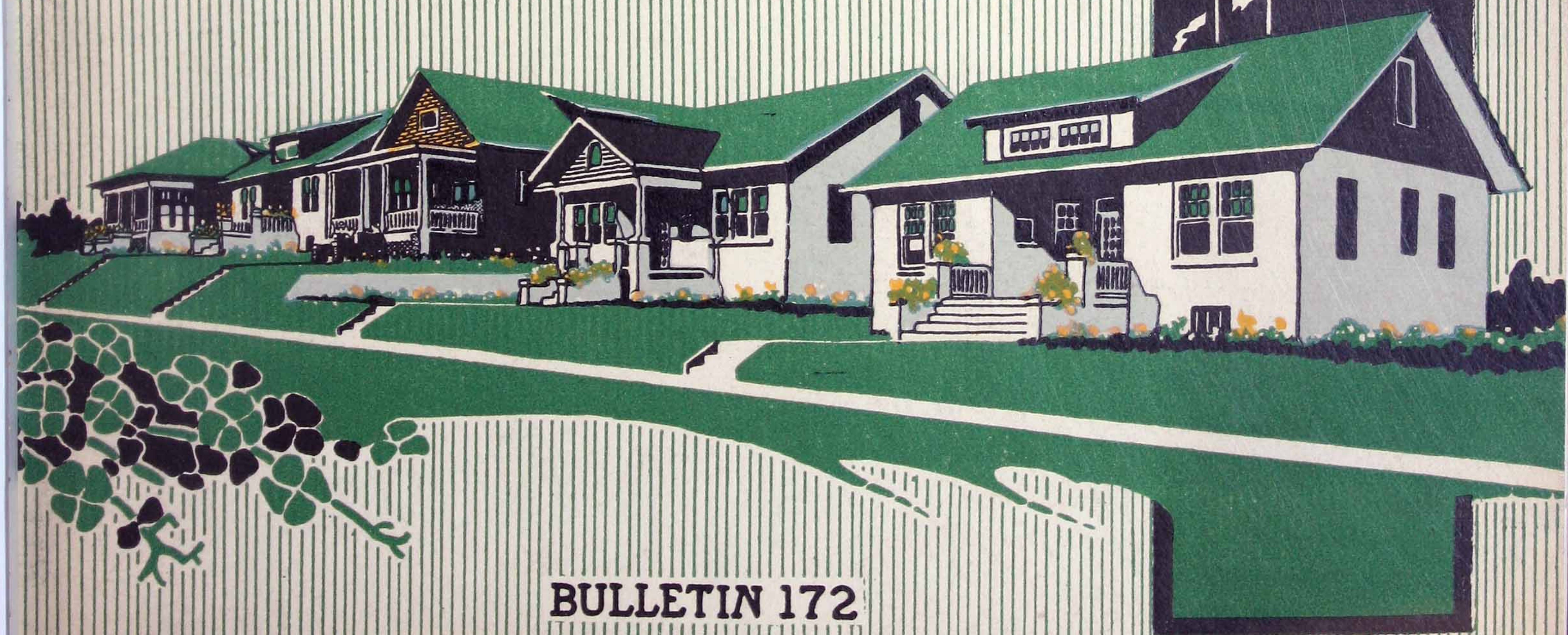


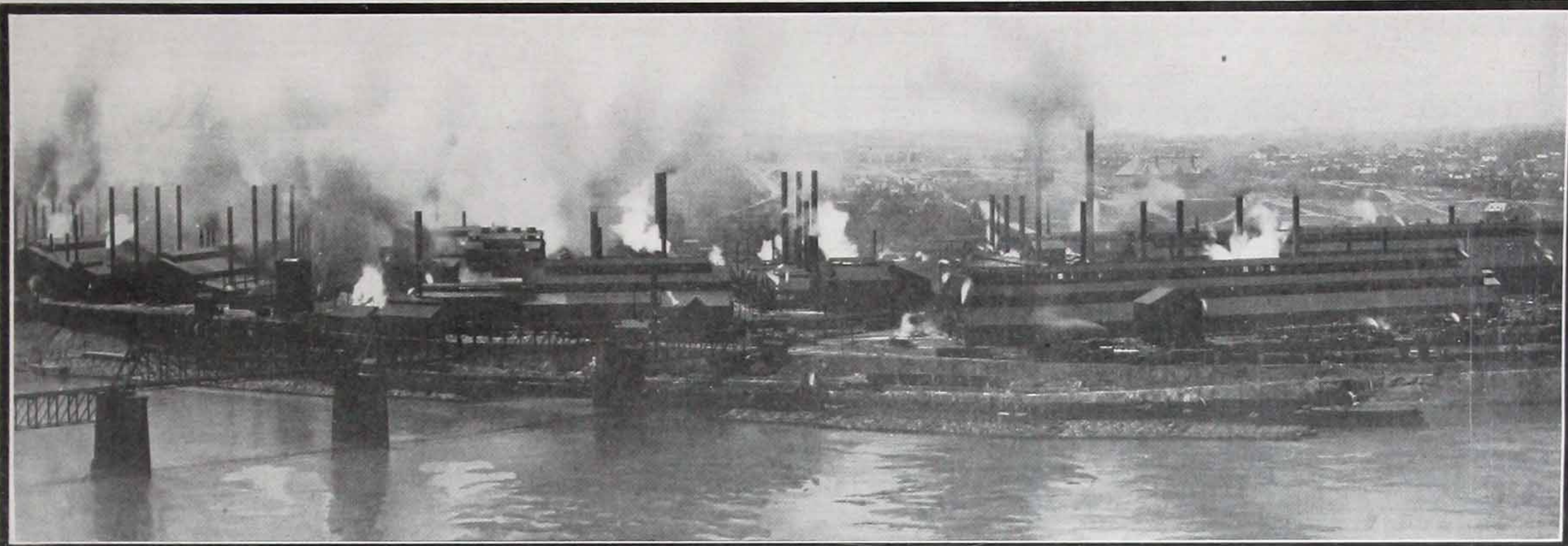
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Industrial Housing



BULLETIN 172

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National Fire Proofing Company



FRANKLIN
INSTITUTE
LIBRARY



ONE hundred and fifty years ago, the nucleus of a world power was born in a handful of struggling and determined colonists.

The phenomenal growth of their adopted land from a vast wilderness to the greatest industrial and commercial nation of the world in this comparatively short period is—in brief—America's record.

With this fact in mind, it will not be difficult to observe, as you read further, why the problem of industrial housing is one of national importance.

Freedom and contentment is so reverse to oppression and neglect that these colonists rapidly developed into an efficient and progressive people. Thrifty and prosperous, their achievements were soon recognized by a watching world. Demands upon their resources by other nations began, industries grew. America became a power. By leaps and bounds the population increased to a hundred million people—yet unavoidably this entire period was devoted to the development of everything but industrial housing.

We are now in a time when serious thought must be given to the problem of housing our ever increasing industrial population. To neglect it longer will be ruinous, for the character of a nation is based upon the domestic life, and not the factory life of its people.

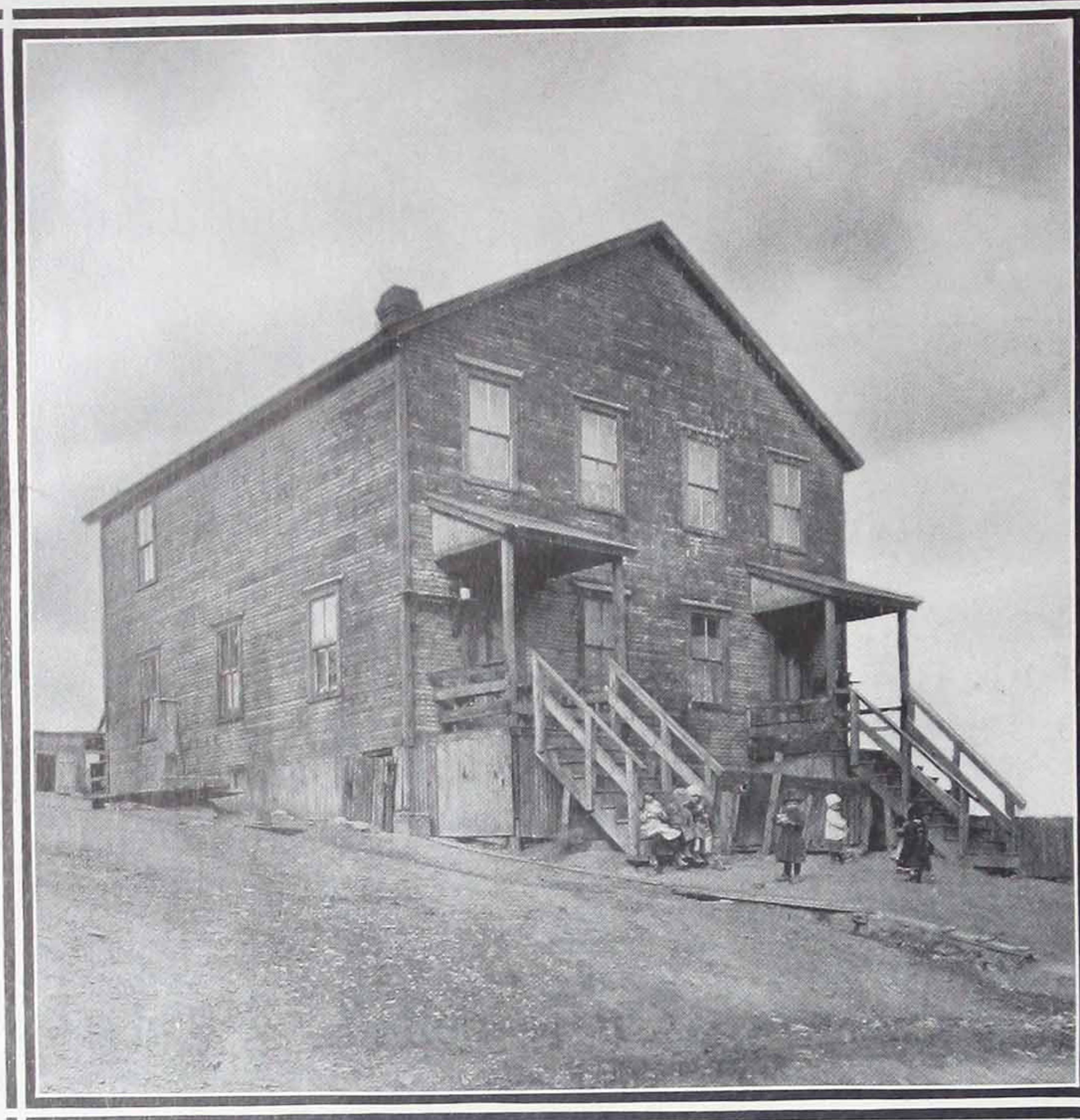
Improvements in working conditions have kept pace with national development along industrial lines. Shops are kept clean. Numberless safety appliances conserve life and limb. Sanitary toilets, lavatories, and in many instances, even individual towels are provided as a safeguard against disease. As a result, efficiency among the workmen has advanced noticeably; still there is something lacking.

Upon investigation, we find that an average of only eight hours out of every twenty-four is spent in the sanitary and comfortable shop. Where does the workman spend the remaining sixteen?

In all fairness we must give due credit to the comparatively few farsighted employers who have already provided improved and even ideal home surroundings for their men. Among millions of our workmen, however, deplorable conditions exist. Many are "warehoused" in lots of fifty or more under one roof, to be "looked after" by a woman who is already burdened with the cares of several children. They sleep two and three abed—five or six beds to the room—and in a room full of stifling air because the majority demand that the windows remain closed. Some are compelled to take rooms in a small one family house that is already filled in excess of its capacity with one or two good sized families. Others must take up their abode amid a long and monotonous row of tumble down shacks. And yet the workman's efficiency should be on a par with that of the well cared for machinery in the up-to-date shop!

IO 89-67433 RF

INDUSTRIAL HOUSING



This inflammable structure is a type called "home" by thousands of our workmen. The surroundings are repulsive, and the interior is crowded and uninviting.

In the building the employer has a poor investment, and he cannot realize the most from workmen living amid such unsanitary, depressing surroundings. Whole families become morally, physically, and as a consequence industrially deficient. Such living conditions produce rebellious and irresponsible characters.

Failure to improve on these conditions will endanger the very existence of our industries and eventually the nation, for "the character of a nation is based upon the domestic life and not the factory life of its people."

Conditions such as these are sure to breed discontentment and immorality, thus reducing our industrial man power far below a satisfactory standard of efficiency. Such surroundings invariably produce the rebellious spirit that incites costly strikes and lockouts.

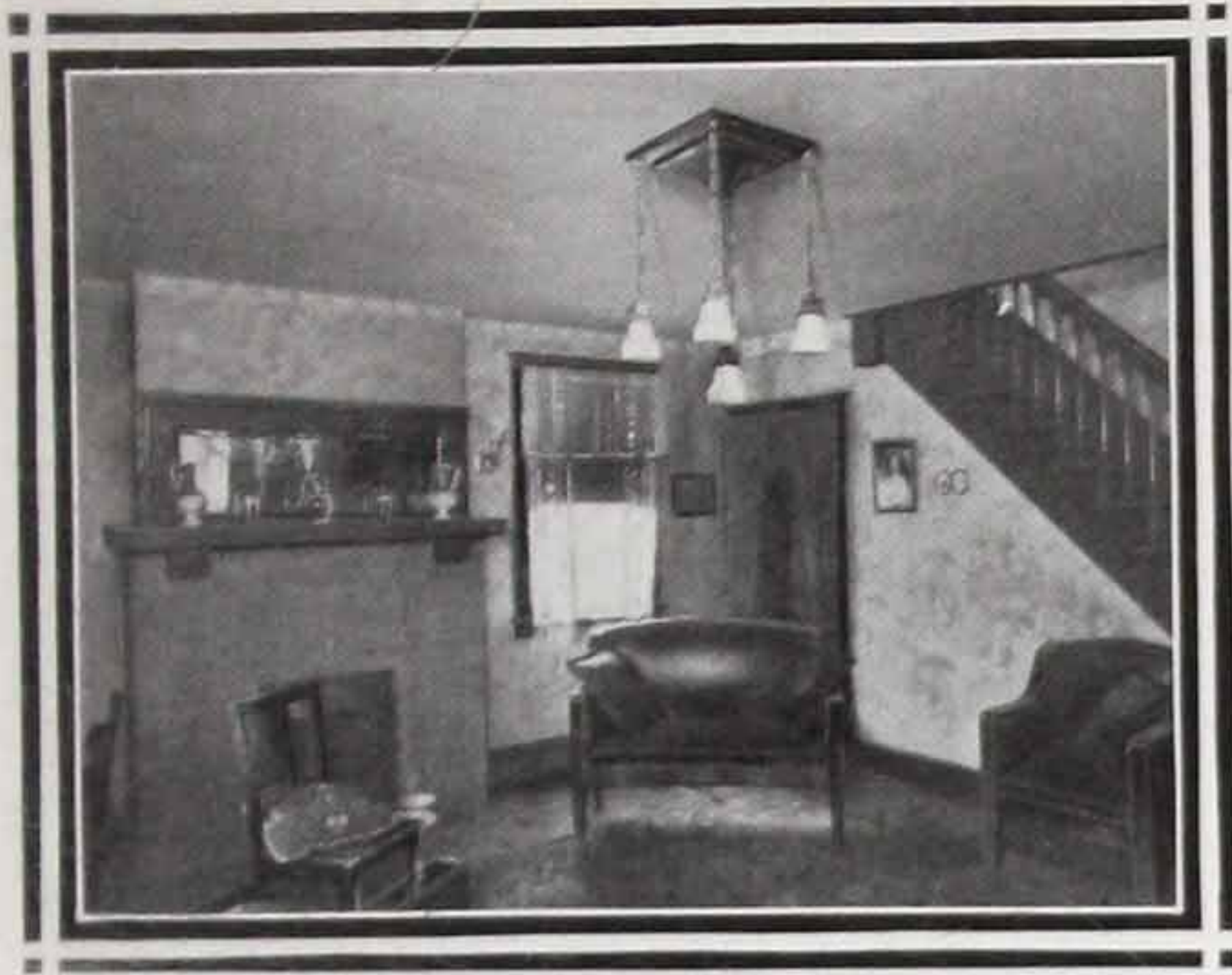
Therefore, duty bound by his responsibility to humanity, the employer should create and maintain for his workmen a standard of living as ideal, relatively, as his own. After a long hard day at the shop, nature demands a complete change, a needed rest. If this cannot be found in the home, a workman is not to be blamed for yielding to temptations that confront him while seeking diversion elsewhere. It is said that a physically or morally deficient employee is as much a detriment to the success of one's business as a similarly deficient soldier is to a nation in time of war.

True enough, many different classes of men must be dealt with; but, when one considers that satisfaction and contentment result from the mere granting of a desire to own a home, a desire that lies in the hearts of all humankind, the problem is not so difficult to solve. Simply building a house is far from the proper solution of this vitally important problem, however; careful consideration must be given the material used in its construction. Provide for your workman a home—one that he can really call "home."

If built of inflammable materials, conditions will not have been improved materially. To the workman it means everlasting dread of the fire peril—sickness as a result of damp and unsanitary quarters, and finally a revival of the discontented spirit that was displaced for a time with the novelty of a new home. To the employer who builds them, it means an endless expense of maintenance, (painting and repairs), and naturally a consequent depreciation of property value.

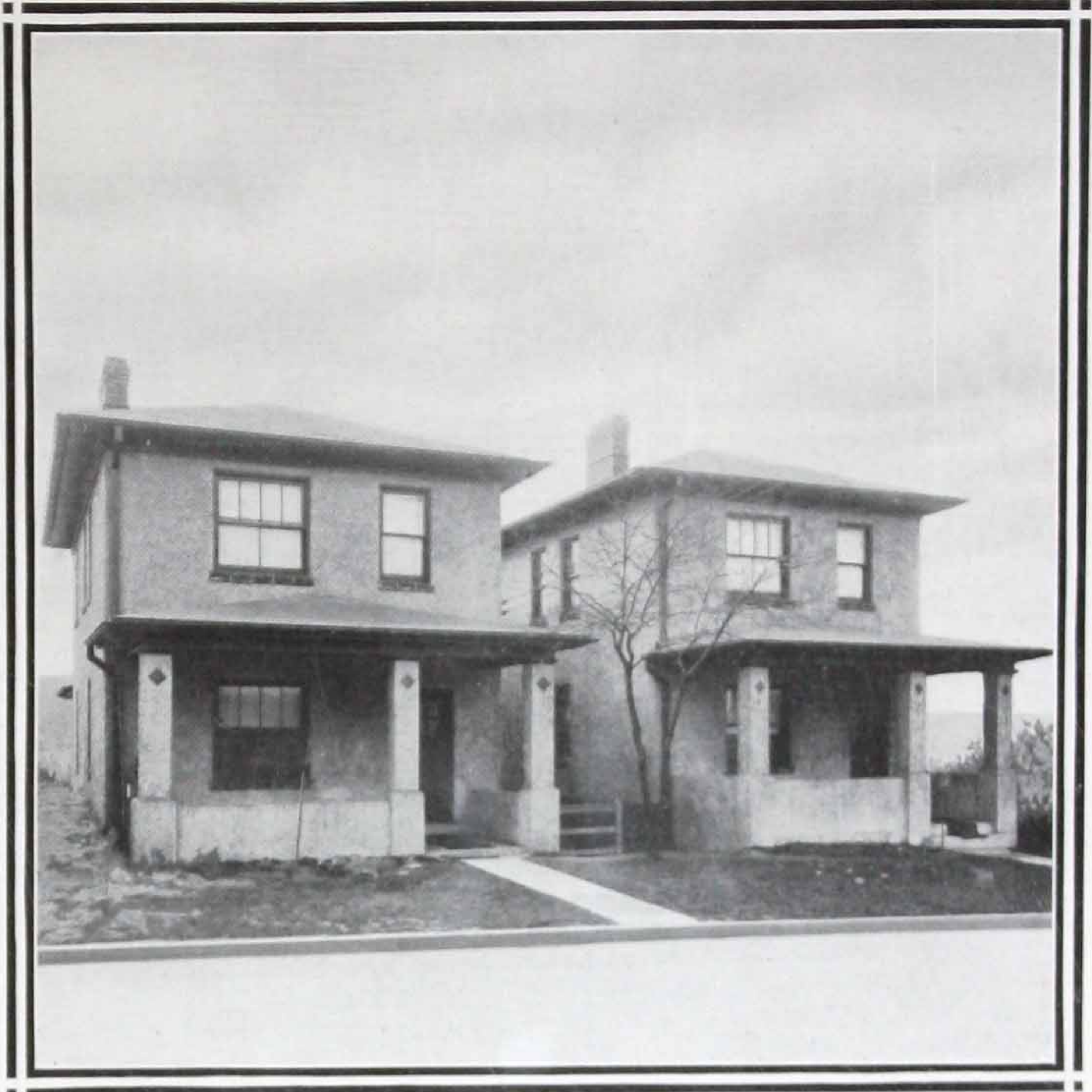
To make the improvement a lasting one (one that returns big dividends in the promotion of contentment and efficiency among the workmen as well as profitable returns on the investment) build permanent with Natco Hollow Tile. Used consistently, Natco

INDUSTRIAL HOUSING



In sharp contrast to the double house opposite, these two single family houses impress at once with their substantial although unpretentious appearance. The "homey" interior is just as cozy as it looks. Natco Hollow Tile with either a stucco finish as shown, or a finished tile face assures warmth in winter, and coolness in summer—the dead air spaces in the walls provide the insulation. The hard burned clay is impervious to moisture and is absolutely fire-proof. Natco homes are repair free and permanent. Such homes are conducive to good health, contentment and efficiency among your workmen.

Fireproof, sanitary buildings of good design are invariably good investments.



provides a home that is absolutely fireproof. The elimination of expensive upkeep makes Natco the most economical building material—first cost is last cost. In a Natco home is found real comfort; it is warm in winter and cool in summer, rat proof and vermin proof. The dead air spaces in a Natco wall provide an insulation against dampness—a Natco home is sanitary.

The large units of Natco Hollow Tile lay up rapidly in a wall. Natco tile is scored with deep seated keys, on the outside for the application of stucco and on the inside for plastering; no furring of walls is necessary.

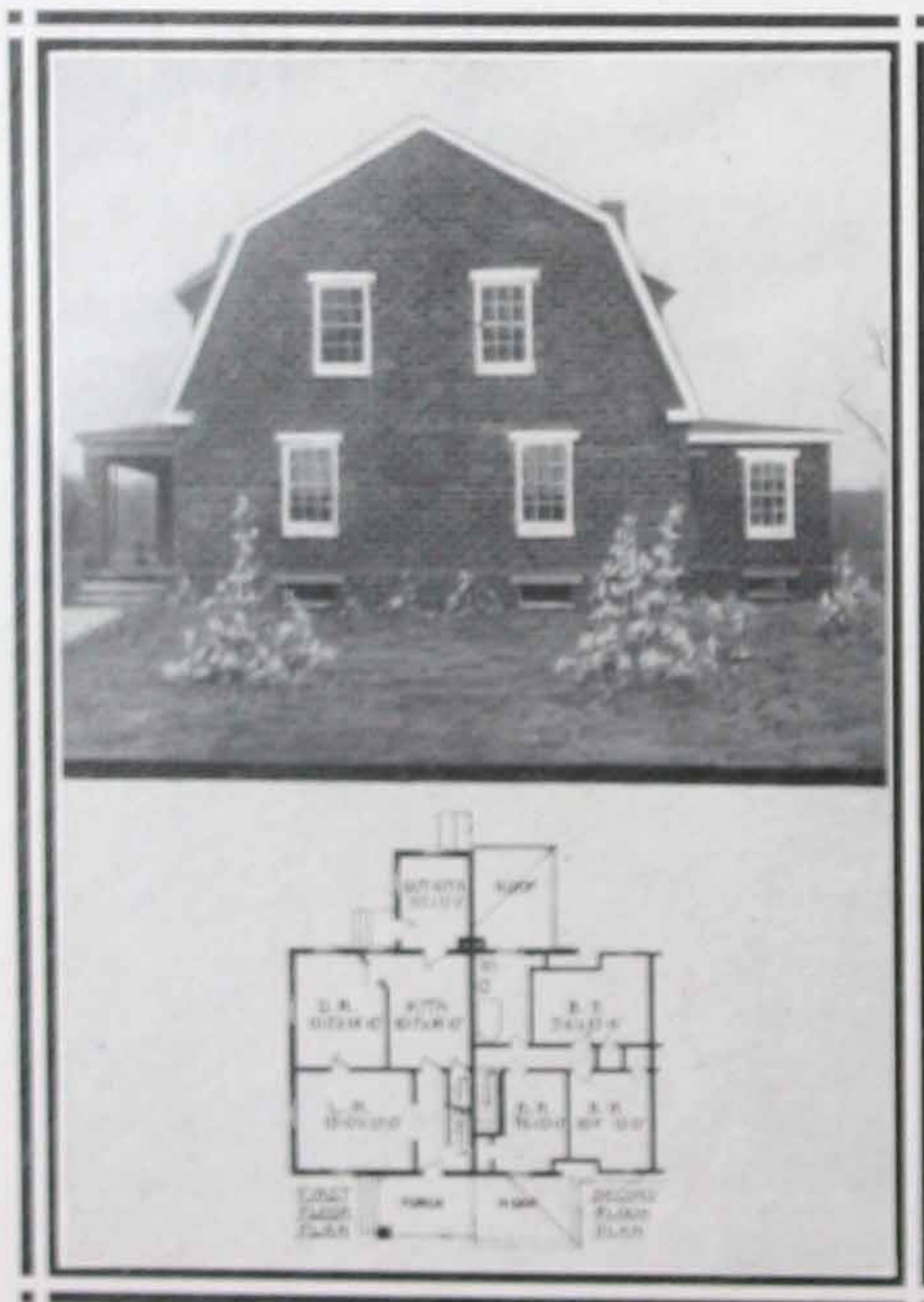
Where an exterior finish other than stucco is desired, use Natco Tex-tile. The beautiful, vari-colored, rough texture face of tex-tile resembles solid brick, but being a larger unit, permits of more rapid erection—and in it is embodied all the other advantages of hollow tile.

The National Fire Proofing Company owns and operates 23 factories in the United States, thus assuring to the consumer a wide and economical distribution of its materials. The National Fire Proofing Co. of Canada, Limited, owns and operates a factory at Hamilton, Ontario.

Then back of all this is a corps of skilled engineers, maintained for the sole purpose of co-operating with those who desire assistance in solving their building problems. Just as easily as Natco solved the problem of sky-scraper construction, so it has solved the industrial housing problems of many of America's big employers. Due to limited space only a few of these developments are pictured on the following pages.

Whether you contemplate building now or in the future, one or more workmen's houses, a factory or building of any kind, don't fail to investigate the possibilities of Natco Hollow Tile. Our free service is gladly extended to those interested. Command us.

INDUSTRIAL HOUSING



BETHLEHEM STEEL CO. HOUSES

SPARROWS POINT, MD.

Architects, Bissel & Sinkler, Philadelphia, Pa.

These fire-safe, repair-free and permanent houses were built of Natco Hollow Tile in 8"x12"x5" units, having one finished 12"x5" face laid to the weather and plastered directly on the interior. This big corporation erected 100 living apartments for white mechanics and 100 apartments for colored labor, as follows:

FOR WHITE MECHANICS—Four cottage-rows, 30'x250', 10 Apartments each, 6 Rooms, Stair Hall, Bath (Illustrated); Thirty double houses, 30'x44', 6 Rooms, Stair Hall, Bath, (See Page 12). First and second floor plan as shown in both types; all have cemented cellars and hot air furnaces.

FOR COLORED LABOR—Ten rows (shacks) 14'x140', 10 one-room Apartments each, 4 men to apartment, double-deck iron cots, cement floors and plastered walls, enameled iron wash-bowl, and stove in each apartment. (See Page 12.) Cook-house provided nearby.

All of these living apartments have hot and cold water, electric light, fireproof division walls, slate or asbestos-shingle roofs.

INDUSTRIAL HOUSING



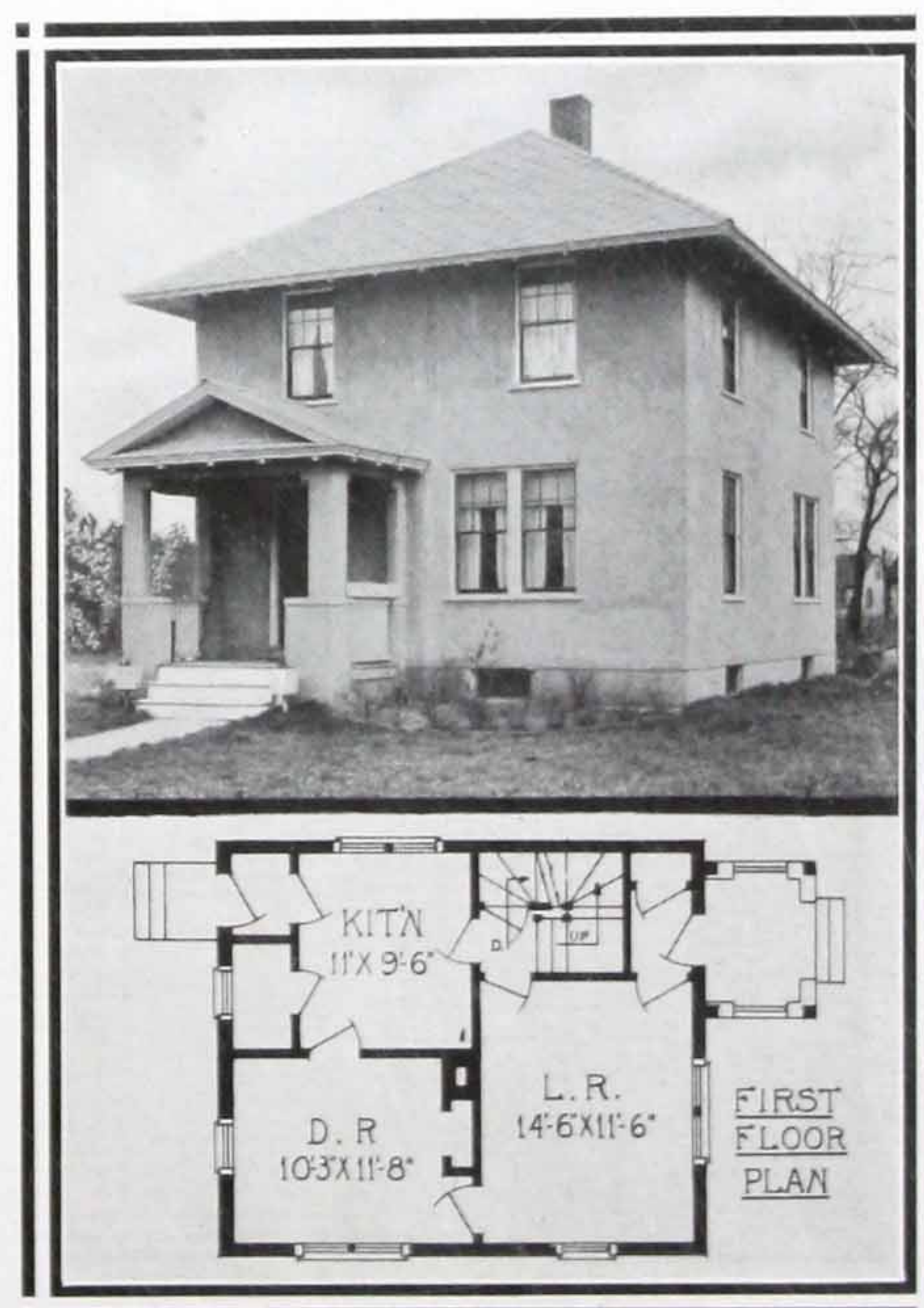
MT. HOPE FINISHING CO. HOUSES NORTH DIGHTON, MASS.

Architects, Joseph M. Darling & Son, Fall River, Mass.

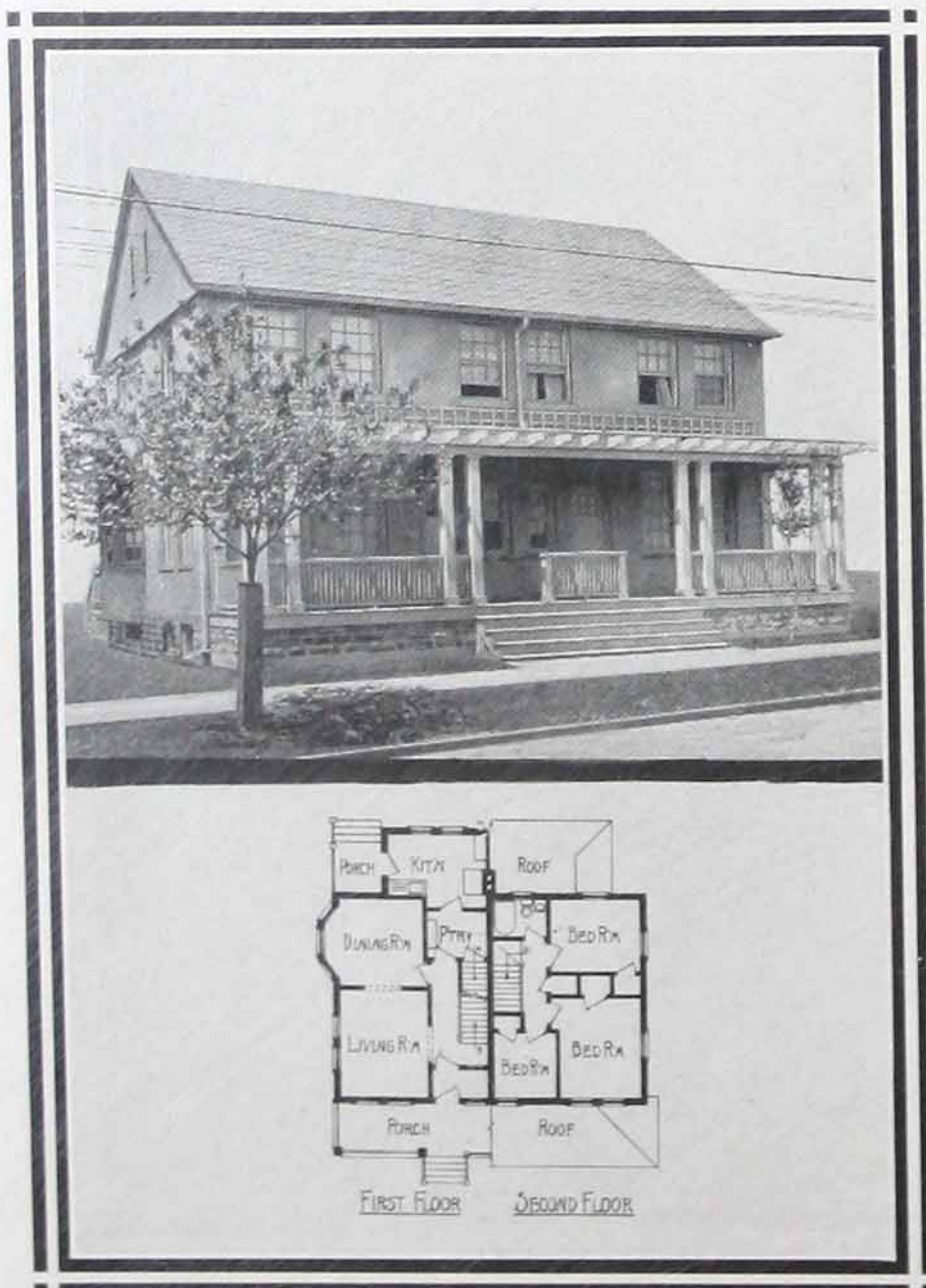
Speaking of ideal "Community Building," this street in the Mt. Hope Finishing Company's housing development at North Dighton, Mass., has charm enough to keep a skilled mechanic and his family "on the job" for life. In sharp contrast to the usual "plan of lots" this property has been cut up into broad, roomy building lots and wide streets with plenty of space between curb and lot line. The nine one-family dwellings and three double-houses have been so arranged along both sides of the street as to please the most exacting.

The houses were erected in 1913; each of the 15 living apartments contains six rooms, sewing room and bath. The approximate cost was \$2500 per apartment. All exterior walls are 8" NATCO HOLLOW TILE covered with an exterior finish of cement stucco and with the ordinary plaster coat applied directly to the interior face of the tile walls.

Such houses are not only fire-safe but also damp proof, vermin proof, and perfectly insulated against sudden changes in temperature.



INDUSTRIAL HOUSING



REMINGTON ARMS UNION METALLIC CARTRIDGE COMPANY HOMES BRIDGEPORT, CONN.

Alfred C. Bossom, *Architect*, New York City.
Hiss and Weekes, *Architects*, New York City.
James Stewart & Co., *Contractors and Engineers*, New York

The camera could get only a small section of the twenty-two single houses, four family homes, eleven apartment rows, and a girl's dormitory in this large housing development, all erected of NATCO HOLLOW TILE.

The outside walls and division walls are erected fireproof of 8x12x12" tile with exterior finish coat of cement stucco plaster, and ordinary wall plaster applied directly to interior wall surface. Roofs of slate or asbestos shingles add the final touch of fire-safety.

The interior finish is varnished cypress; floors long-leaf yellow pine, scraped and shellaced. Modern plumbing was used throughout; bathrooms are equipped with best fixtures, tile floors, and medicine cabinet; and all houses were completed with sewers, hot and cold water, and hot-air heating plants. The monthly rentals for various homes were so scaled as to equal about the weekly wage of the resident employee. For the employee with an inclination to own his home a Building & Loan Association provides the necessary assistance.

INDUSTRIAL HOUSING



GOODYEAR TIRE & RUBBER CO. HOMES

GOODYEAR HEIGHTS, AKRON, OHIO

Architect, Geo. H. Schwan, Pittsburgh, Pa.

Landscape Designer—Warren H. Manning

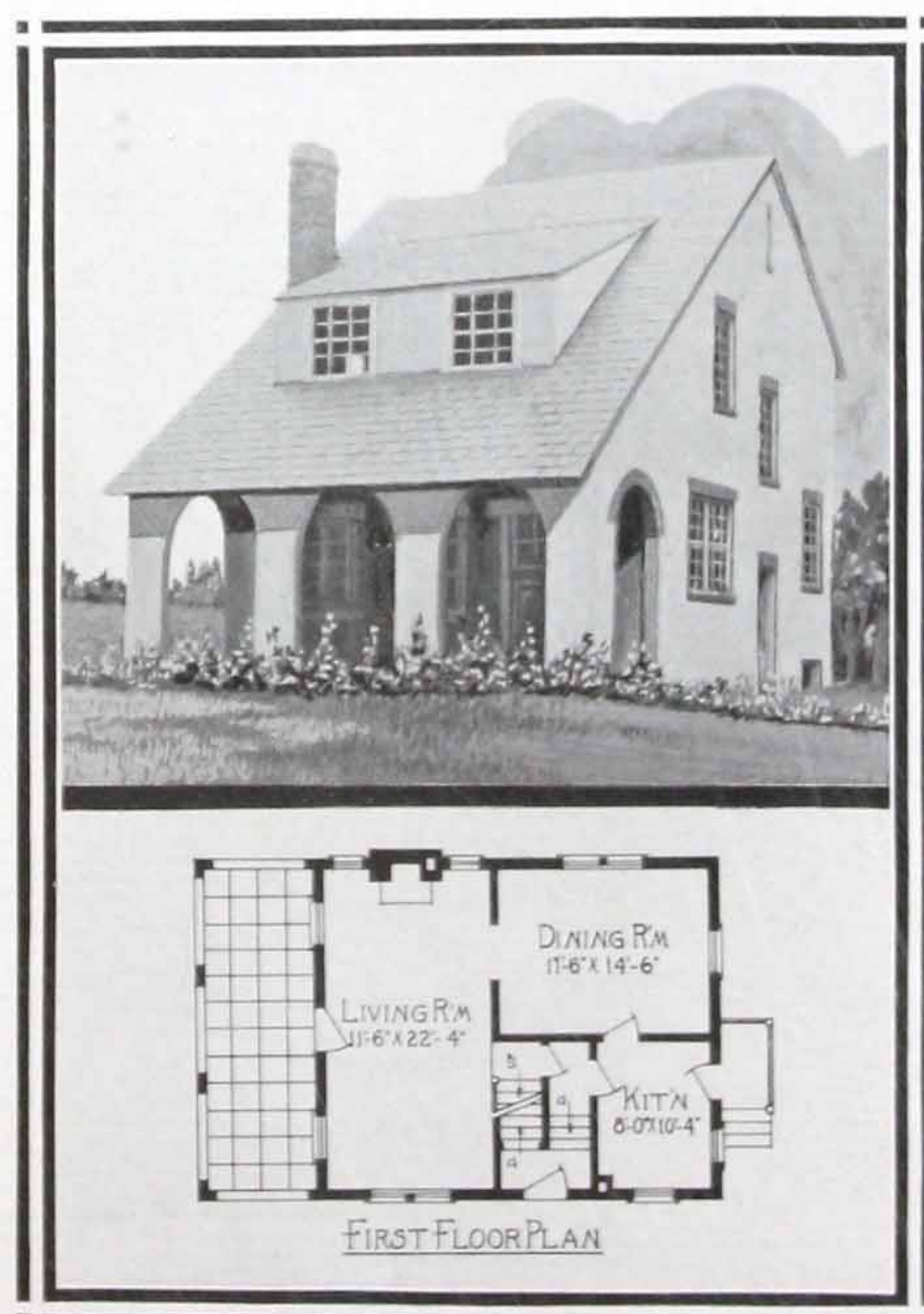
For the development of a three hundred and fifty acre tract into beautiful home sites, this big corporation enlisted the services of a landscape gardener, and an architect of nationally recognized talent.

For use in the foundations and the exterior walls of fifty of the best of these homes, the Architect chose NATCO HOLLOW TILE.

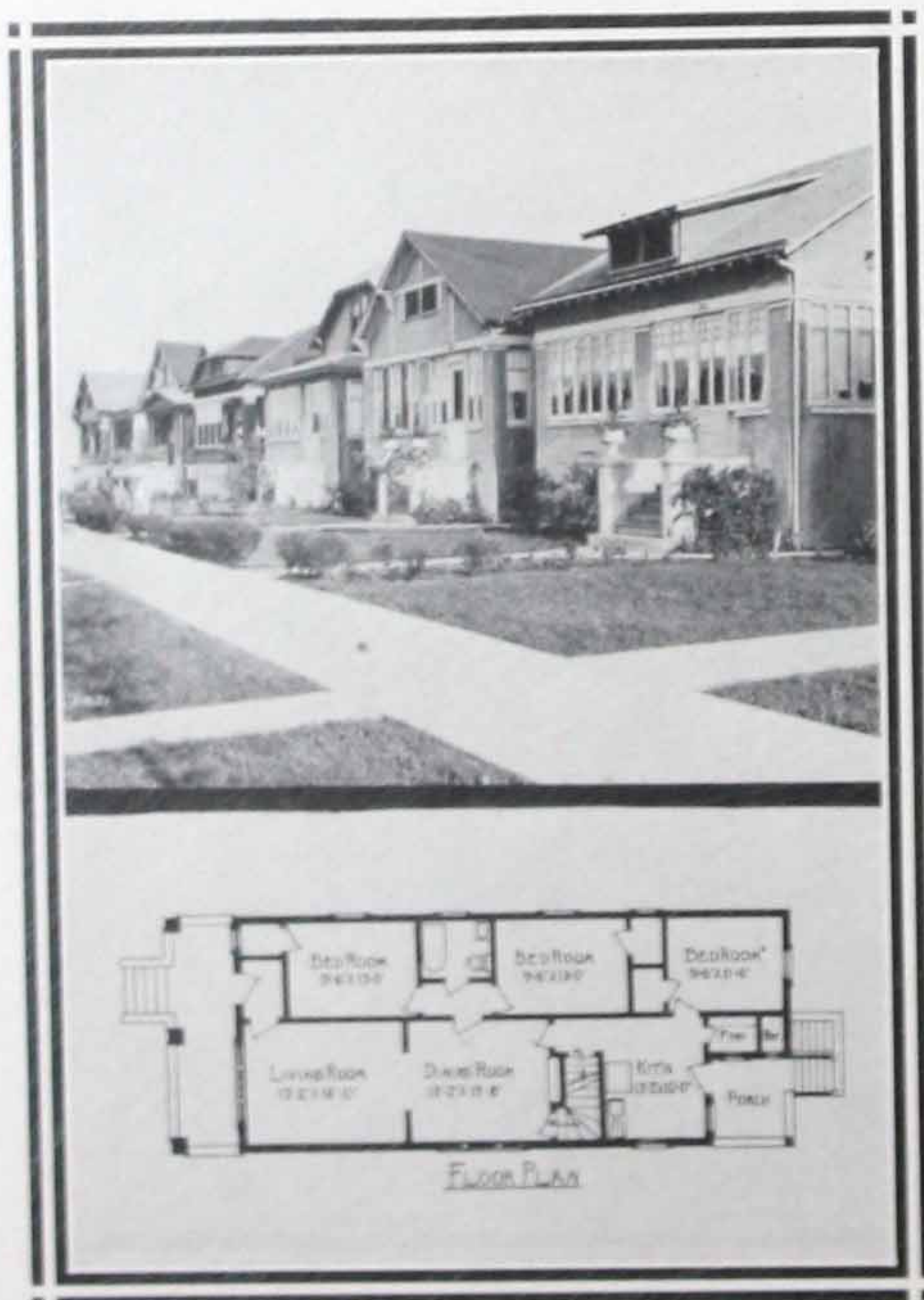
The tile is laid up in cement mortar, and the heavily scored exterior surface is covered with a finish of white cement stucco plaster, which with the greens and browns of lawn, foliage, etc., presents a very pleasing contrast that will wear well.

Tile eight inches thick as used in these homes for the exterior walls above grade is strong enough for the ordinary two and a half story residence.

If something other than a stucco exterior finish is desired, NATCO HOLLOW TILE in the same thickness, but with one finished 12x5" face is used with excellent results, as illustrated on pages 4 and 10, and as detailed on inside back cover.



INDUSTRIAL HOUSING



MODEL HOUSING DEVELOPMENT

ROGERS PARK, CHICAGO, ILL.

Architect, Builder and Owner—Niels Buck, Chicago

Here are twenty-five fire-safe bungalows of moderate price, suitable for the better classes of workmen—skilled mechanics and men with moderate salaries.

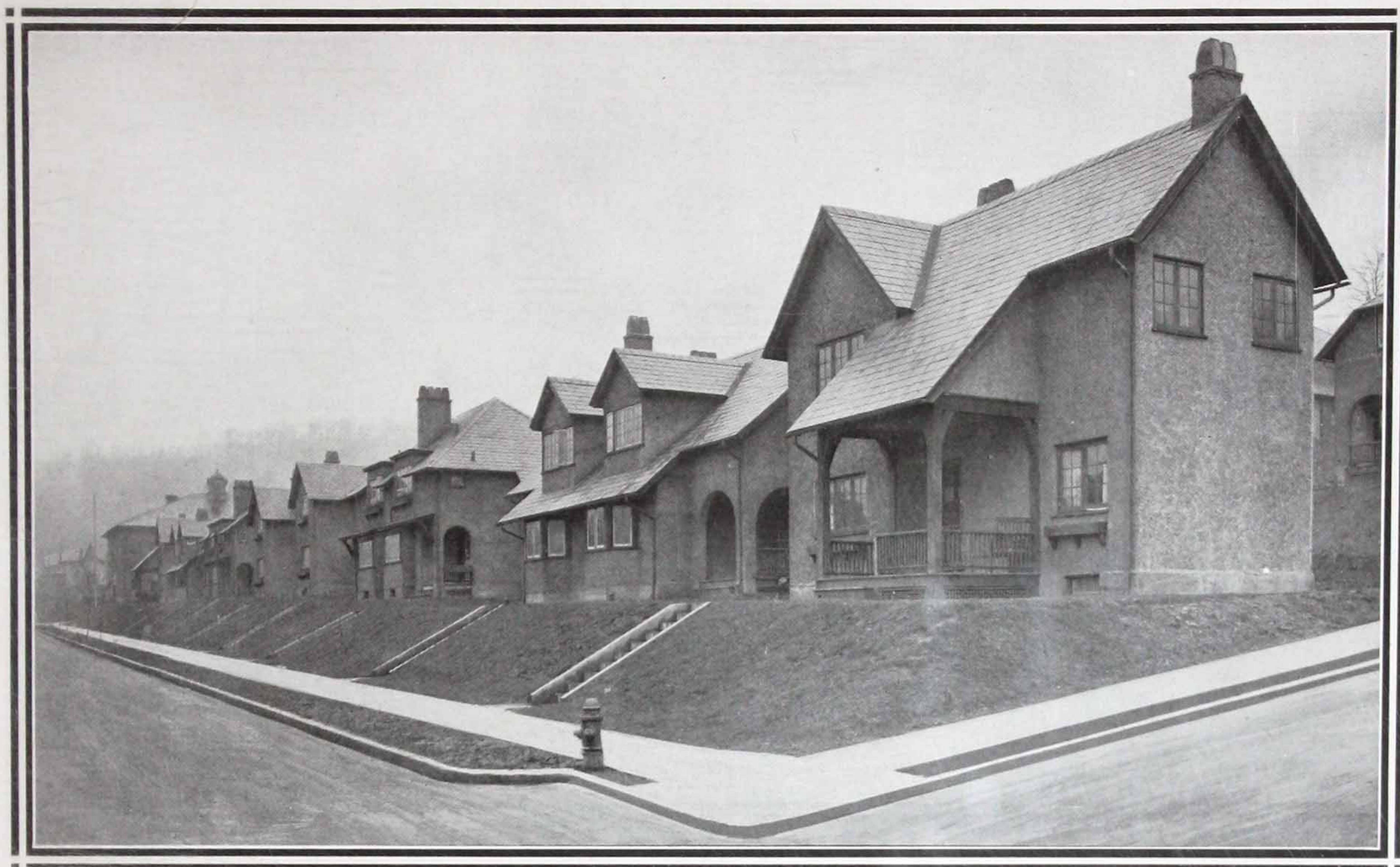
After twenty years experience in the construction of low priced residences, Mr. Niels Buck became impressed with the growing demand for homes more nearly fireproof than the inflammable structures he had been erecting. So he used NATCO HOLLOW TILE for his initial venture into the field of fireproof construction with a remarkable measure of success.

The results here illustrated speak for themselves and demonstrate that low first cost and a minimum outlay for maintenance can go hand-in-hand with a conveniently arranged interior, and an attractive exterior.

These bungalows contain 5 to 6 rooms, bath and hot water heating system; are completely piped for water, sewage and gas, and wired for electricity. The average cost per house ready for occupancy, was less than \$3000.00 and they were quickly sold.

The exterior walls are 8" in thickness of NATCO HOLLOW TILE, the plaster coats being applied directly to the exterior and interior scored wall surfaces.

INDUSTRIAL HOUSING



CRUCIBLE STEEL CO. DEVELOPMENT MIDLAND, PA.

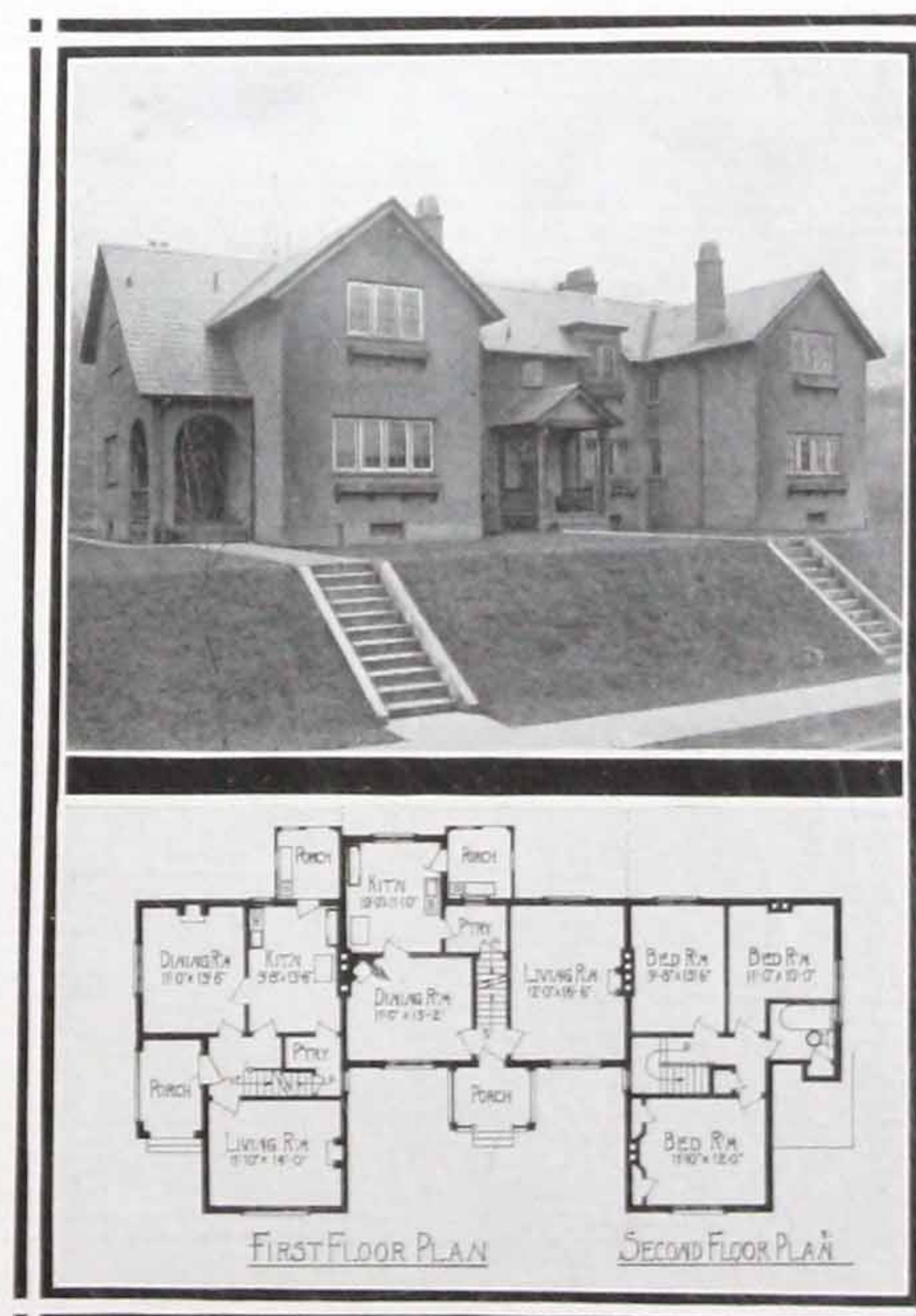
Architect—Albert H. Spahr, Pittsburgh, Pa.

The houses illustrated comprise a typical group of approximately eighty houses erected by the Midland Improvement Company for the above corporation.

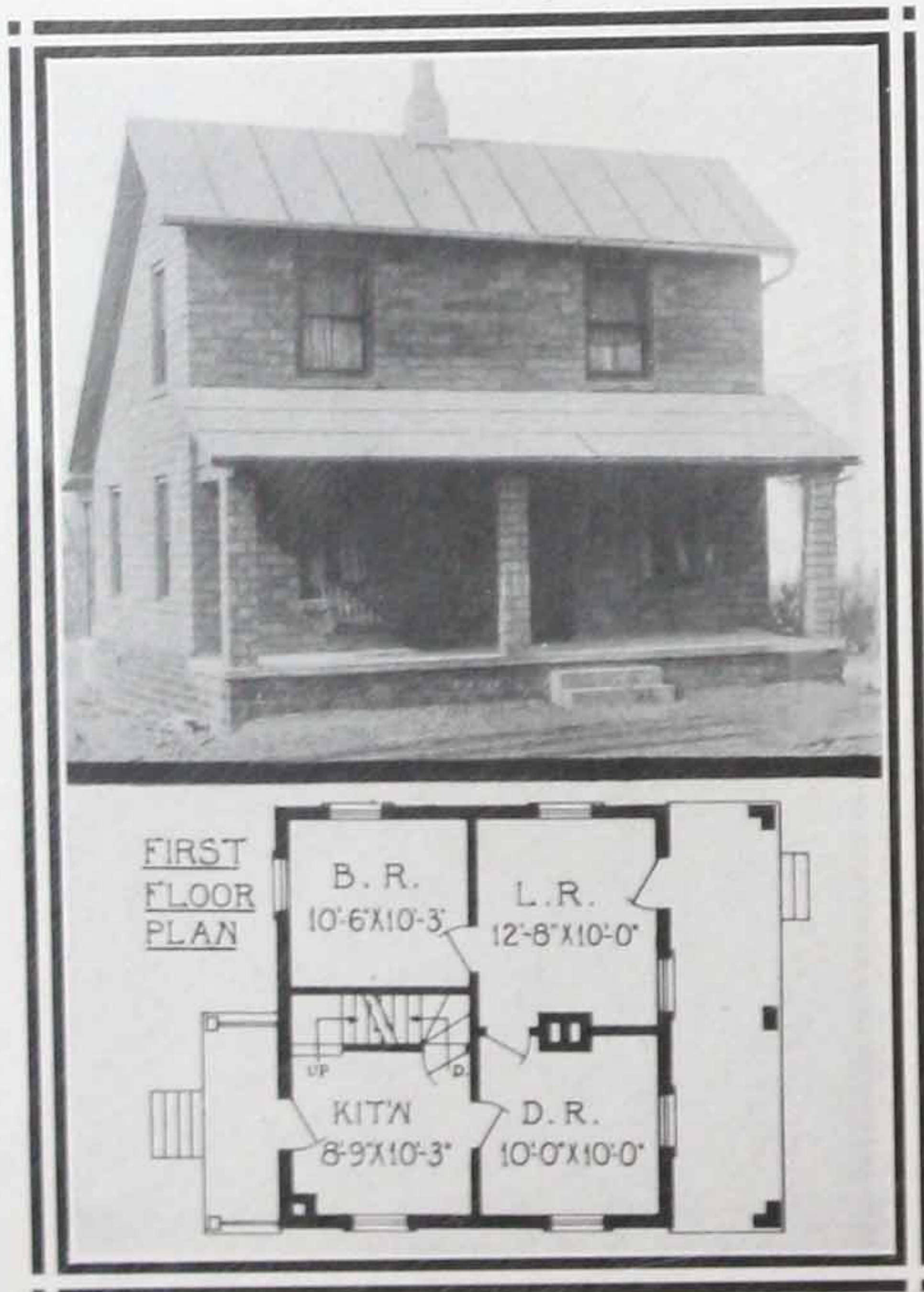
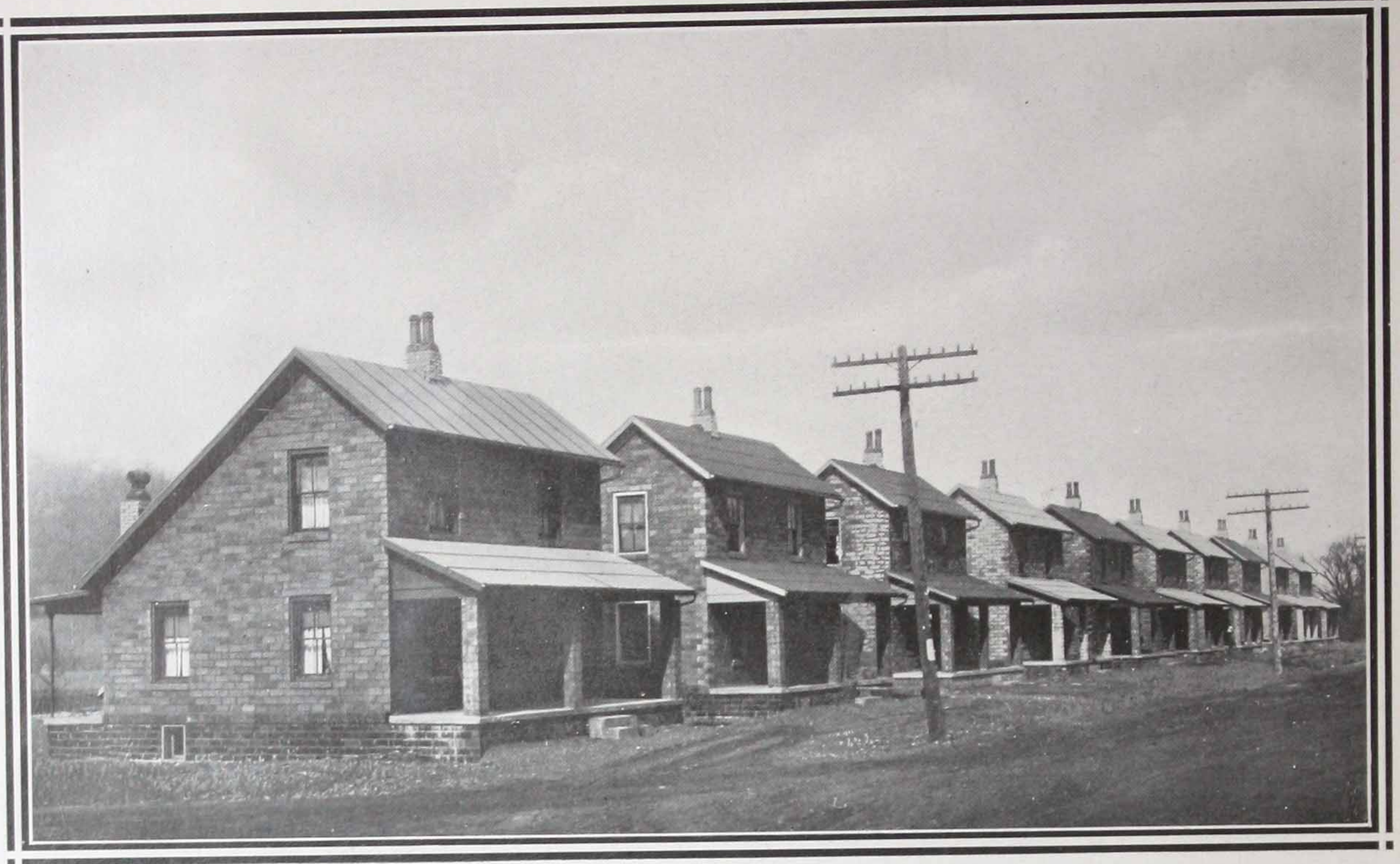
Single, double and triple apartment homes have been economically, conveniently, and beautifully grouped on a tract of sloping land rising above the steel plant and having an outlook on the Ohio River.

The house illustrated contains three two-story homes and the plan reproduced reveals the fact that, when well-designed, three homes on one foundation and under one roof can have a maximum of light, air, and privacy at the same time. Each apartment in the entire group of thirty-two illustrated contains six rooms, bath, and stair hall, piped for gas and water.

The exterior first story walls are 8" thick, built of 8x12x12" NATCO HOLLOW TILE; the second story exterior walls are 6" thick of 6x12x12" NATCO, and all division or party walls in double and triple houses are also of 8x12x12" NATCO.



INDUSTRIAL HOUSING



WORKINGMEN'S HOUSES NATIONAL FIRE PROOFING COMPANY HAYDENVILLE, OHIO

*Designed by G. R. Robinson, Engineer
Haydenville, Ohio*

Typical of "better homes" for the industrial worker, the ten houses illustrated are far above the average. Well designed for six comfortable rooms and basement, water, gas and plenty of light, such "company" houses mean contented and healthy families. These houses can be reproduced under average conditions for approximately \$1600 to \$2000 depending upon the location and the number contracted for at one time. The exterior walls from footings to underside of roof, including the porches (floors of which are reinforced concrete), are erected of 8" x 5" x 12" NATCO BUILDING TILE; the interior partitions are also erected of 5" NATCO HOLLOW TILE and although this construction adds something to the initial cost of the smaller house, the additional protection against fire and cracking plaster is worth all its costs. They are repair free and will outlast practically any other type of construction.

INDUSTRIAL HOUSING

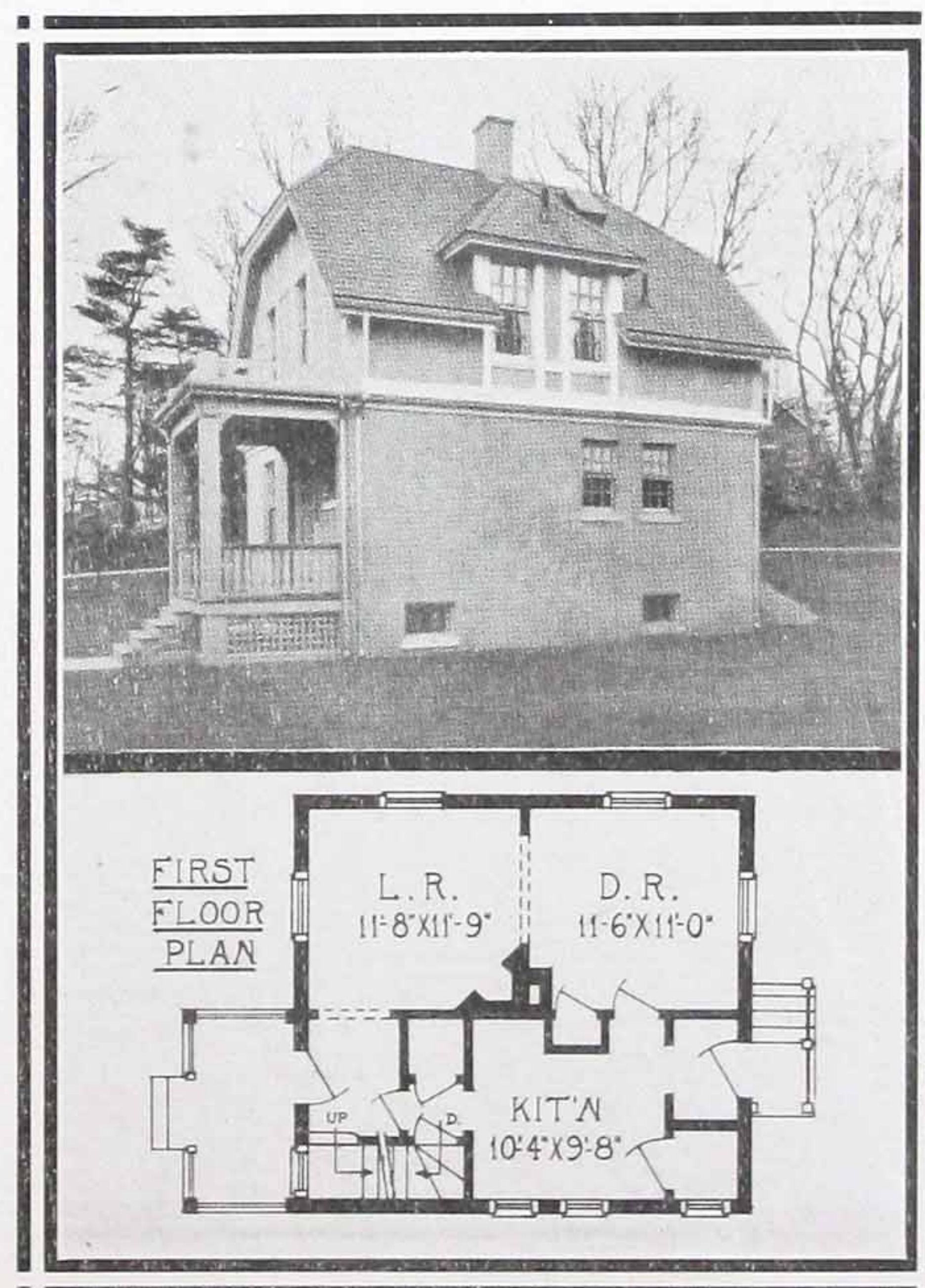


WORKINGMEN'S HOUSES
 WOODBURN, FOREST HILLS, MASSACHUSETTS
Architects, Kilham & Hopkins, Boston, Mass.

An excellent example of all that is modern, artistic, and at the same time practical in house grouping and home building. The property is more closely covered than that illustrated on Page 5 but the development has been laid out with very good taste and judgment. From both front yard or from back yard each home is inviting enough to attract first-class workmen.

The houses contain basement, six and seven rooms, reception hall, bath, amply large enough for the average workman's family. The exterior walls are 8" NATCO HOLLOW TILE finished on the exterior with cement stucco and on the interior with ordinary plaster applied directly to the tile. The roofs of light sea-green slate afford additional fire protection.

Fire-safety and a saving in cost of repairs and painting always results from the consistent use of Hollow Tile, and even when slightly higher in first cost, NATCO HOLLOW TILE is cheaper in the end because of this inevitable saving in up-keep, insurance and repairs.



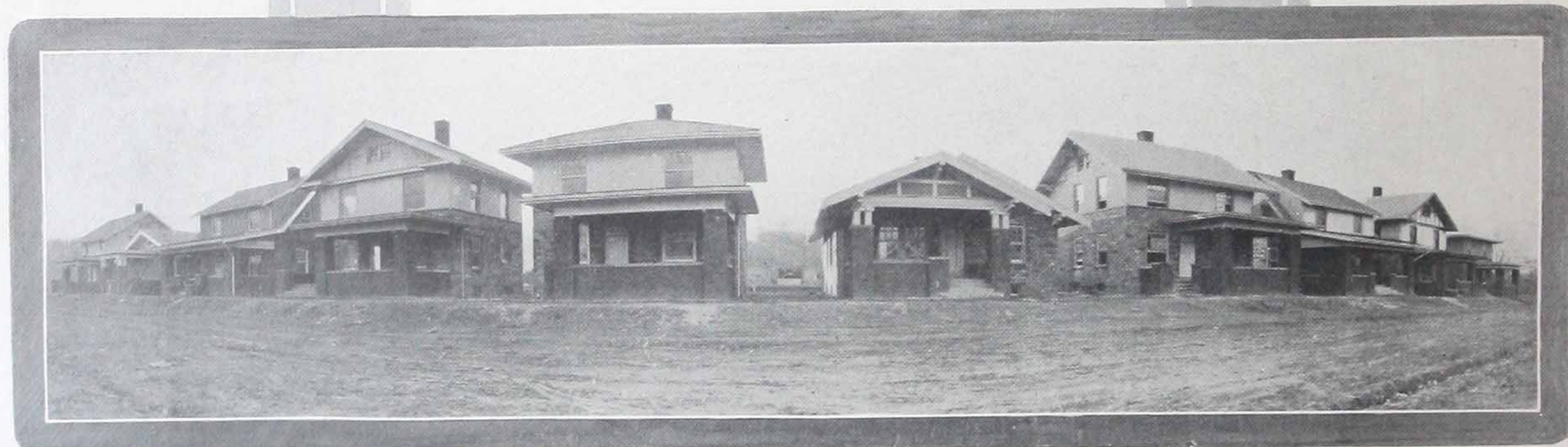
INDUSTRIAL HOUSING



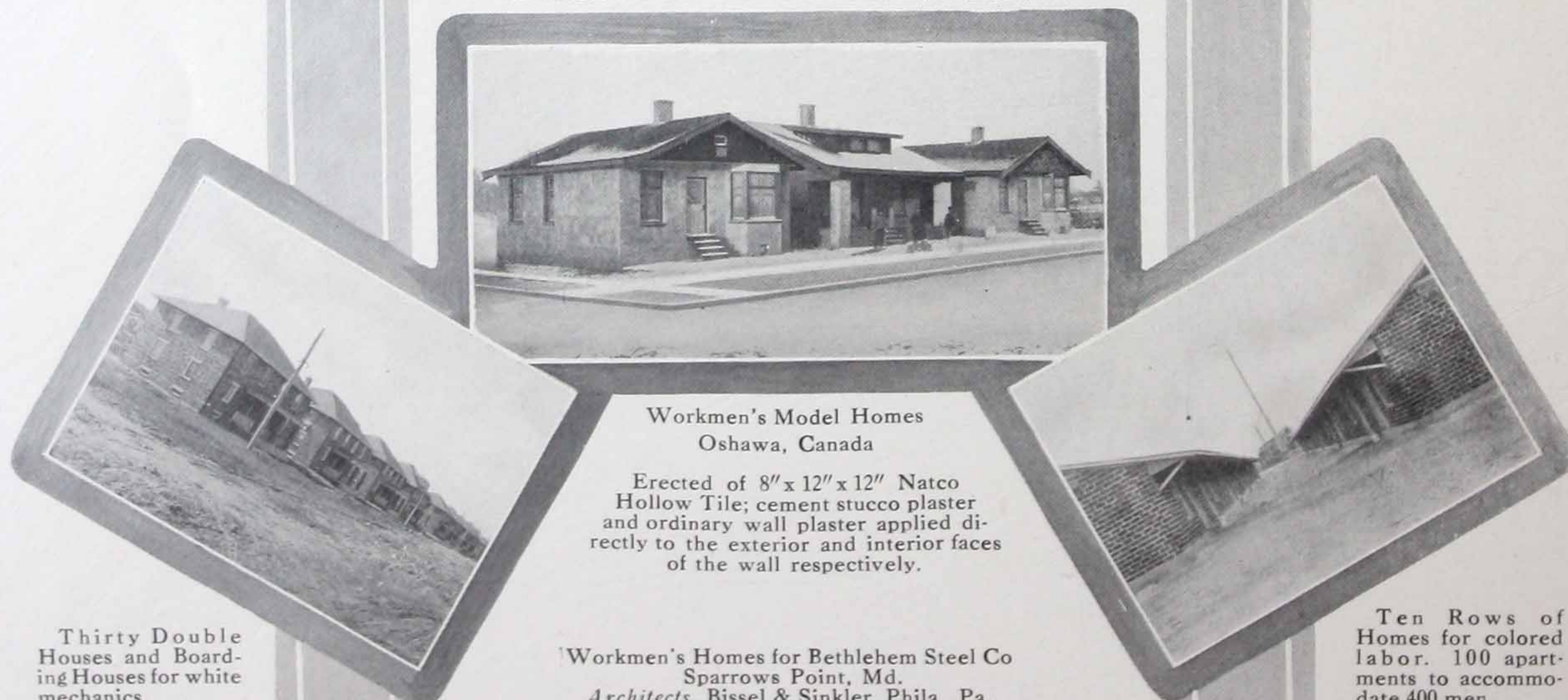
Cottages. Three of thirty-one. The Rome Brass & Copper Co., Rome, N. Y. *Architects,* Mann & Mac Neille, N. Y.; *Builders,* Standard Buildings Inc., N. Y.

Natco Hollow Tile, 8"x12"x5" was used, with a finished 12"x5" face for the exterior and one 12"x5" face scored for plaster on the interior. The central illustration in the above group is a double house, six rooms and bath on each side. The two one-family houses shown each contain 5 rooms and a bath.

These architects and contractors designed and erected seventeen houses from the same plans for the Solvay Process Company, Syracuse, N. Y.



Seventeen Houses for Keystone Steel & Wire Co., Peoria, Ill.
Built of 8"x12"x5" Natco Hollow Tile
Architect and Builder, Jacob Winzeler, Tremont, Ill.



Workmen's Model Homes
Oshawa, Canada

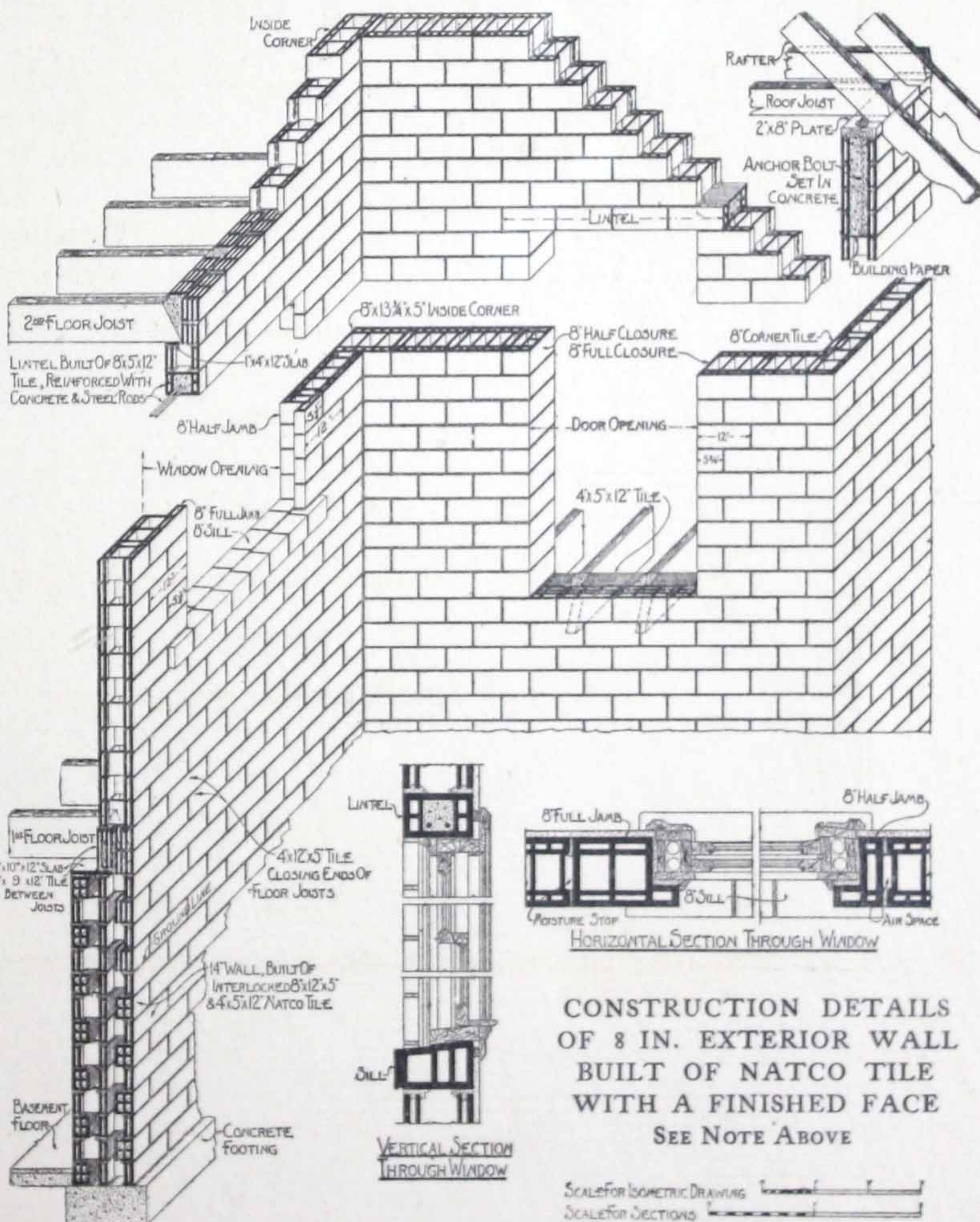
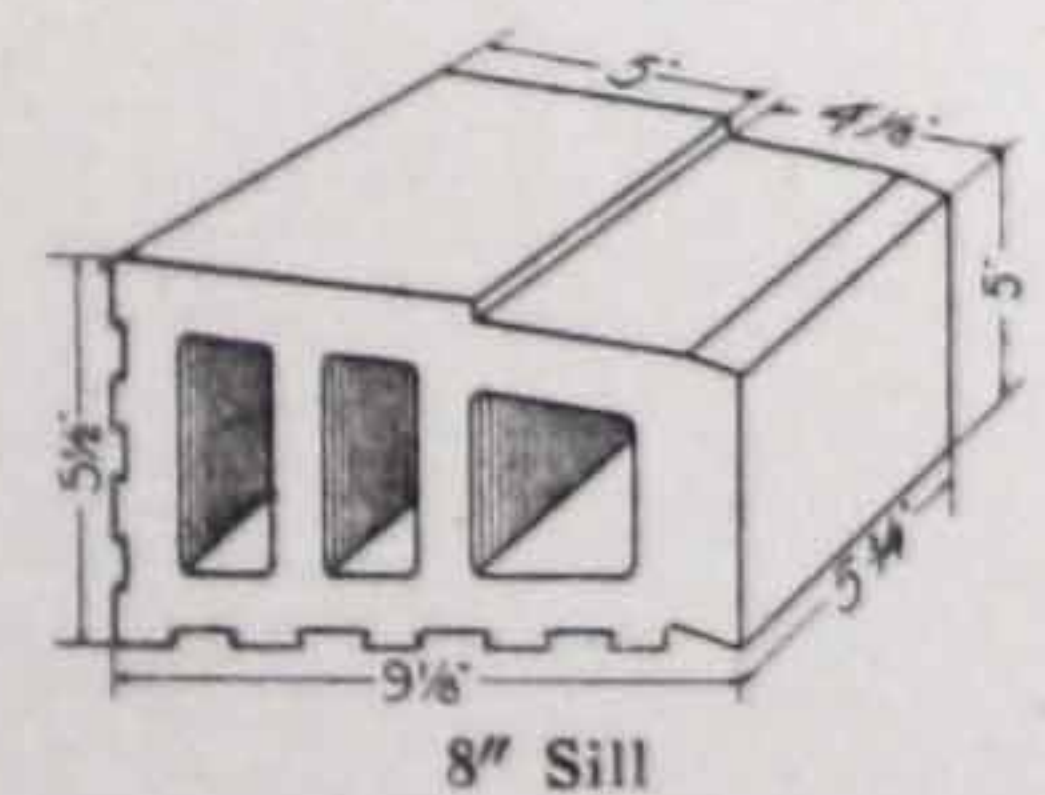
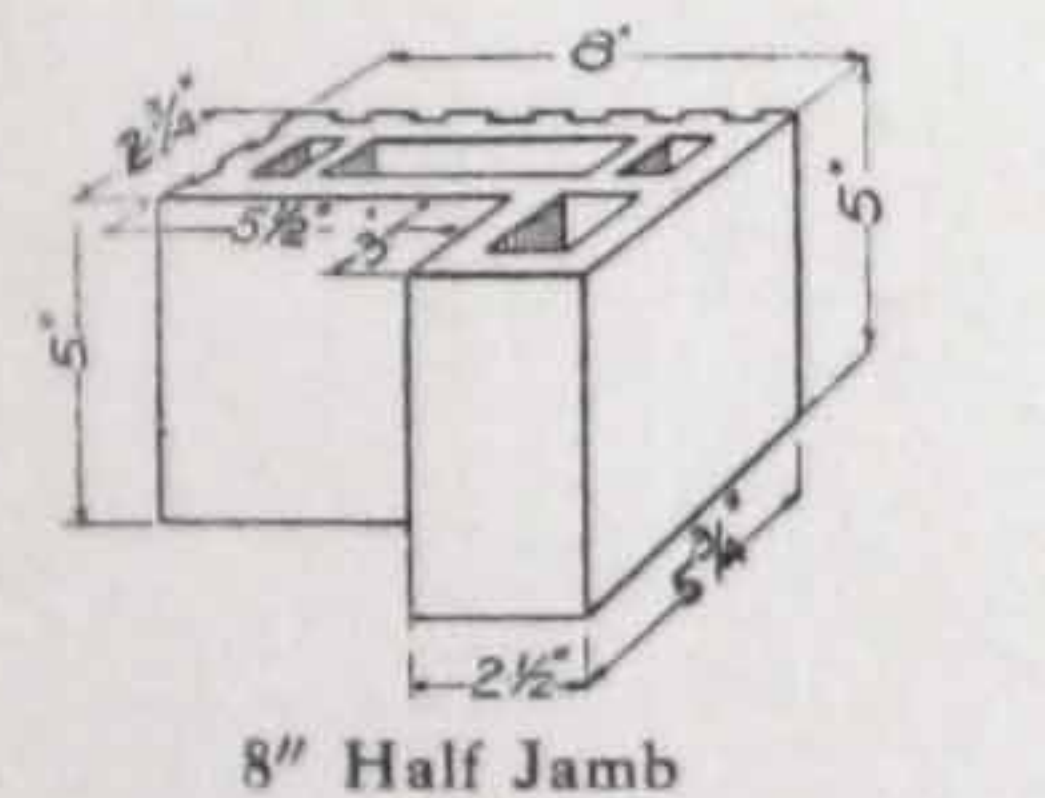
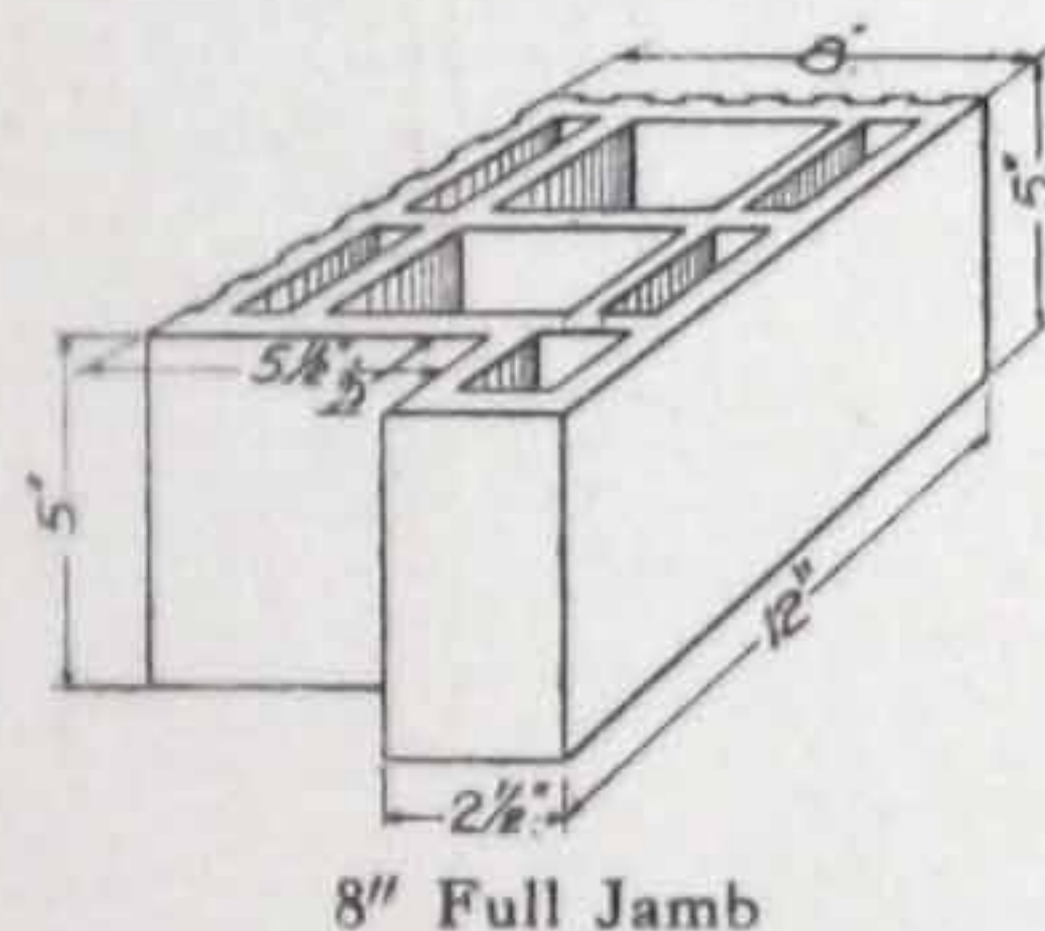
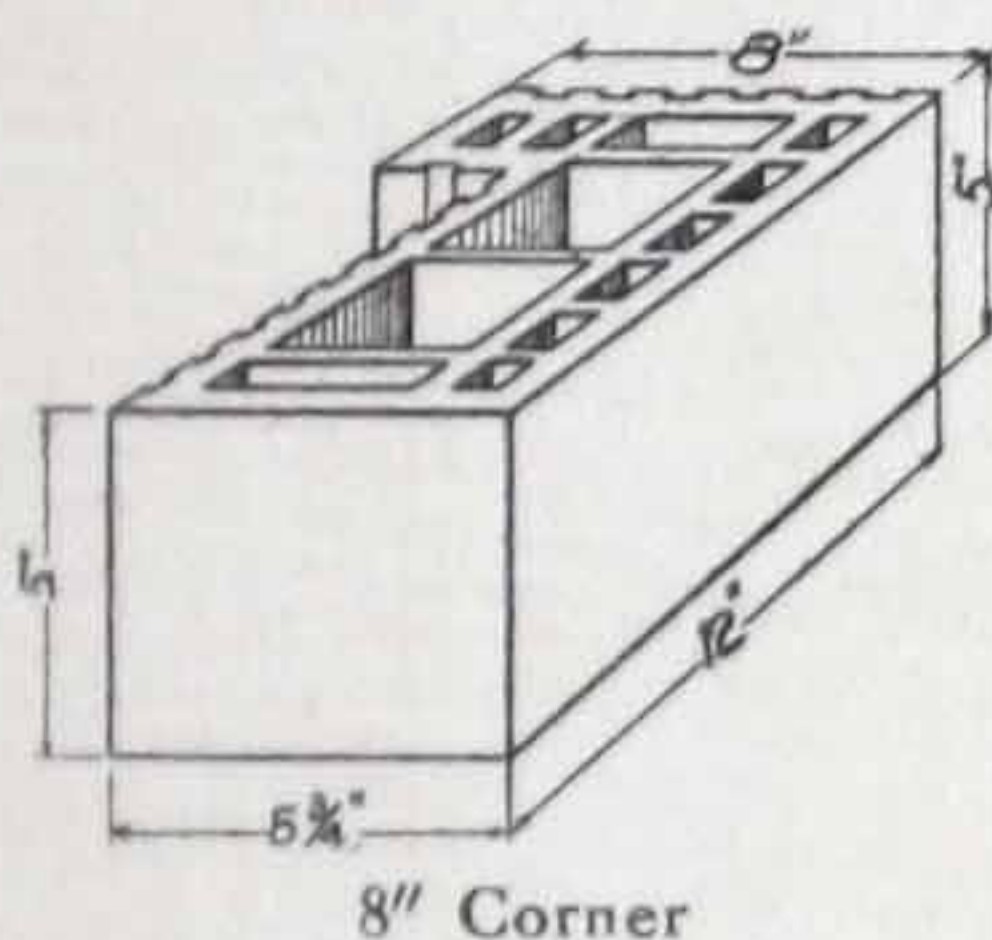
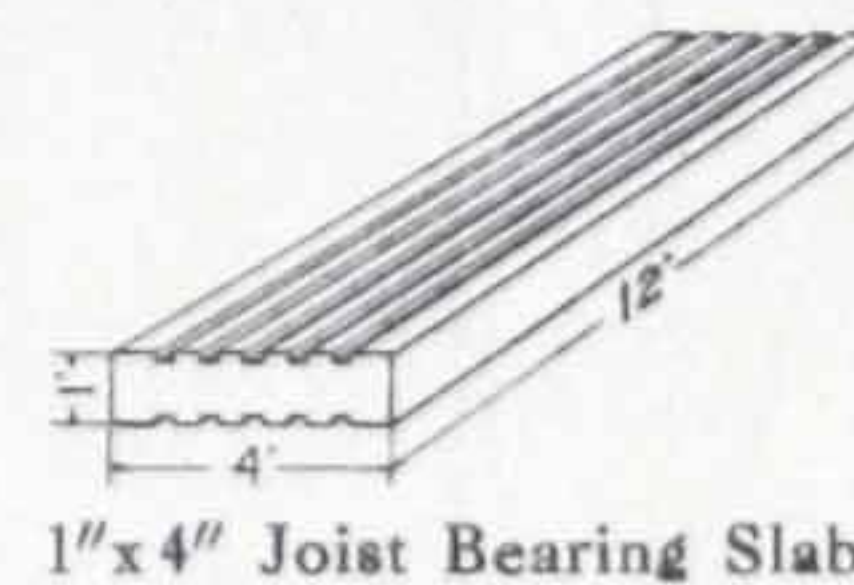
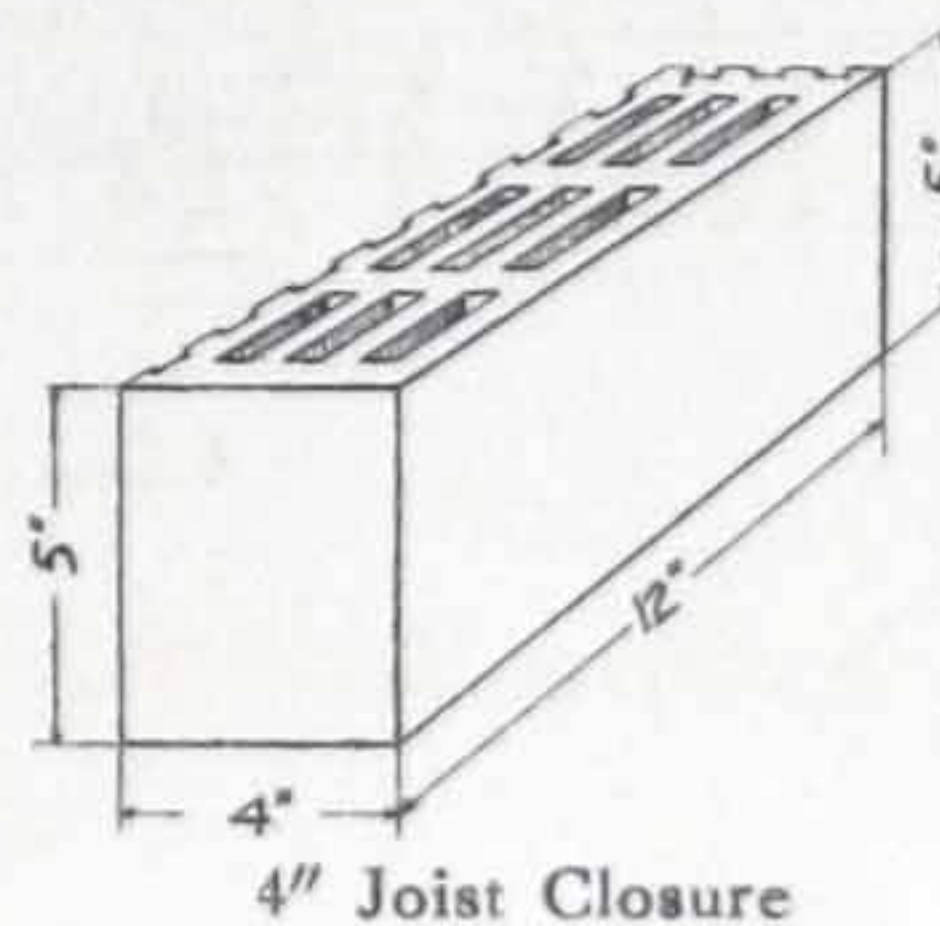
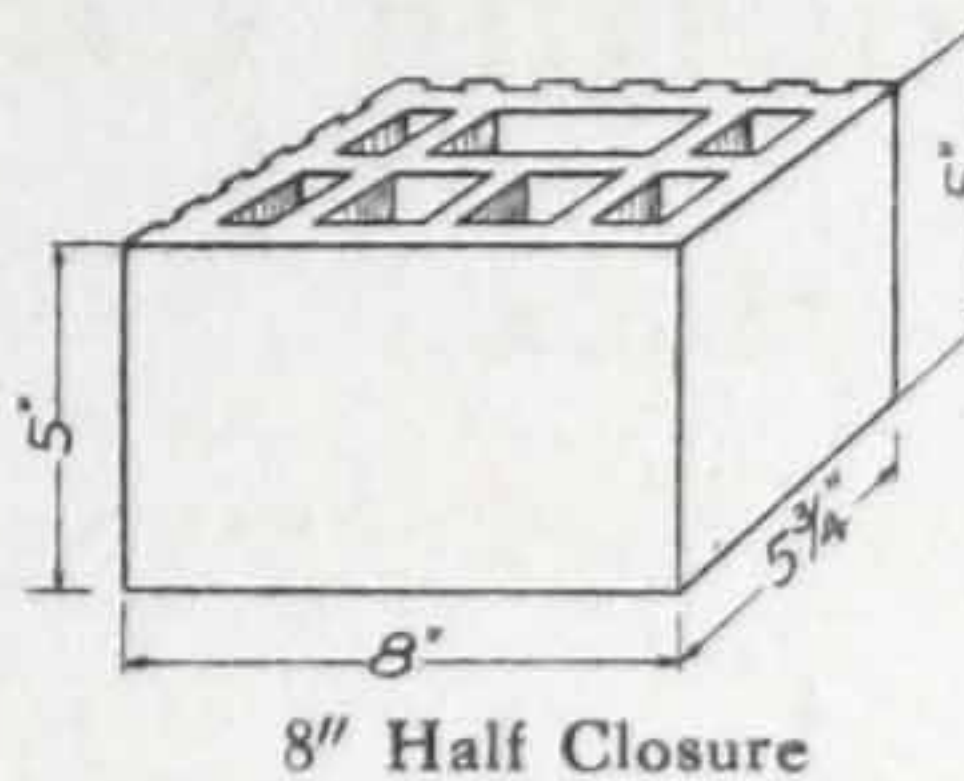
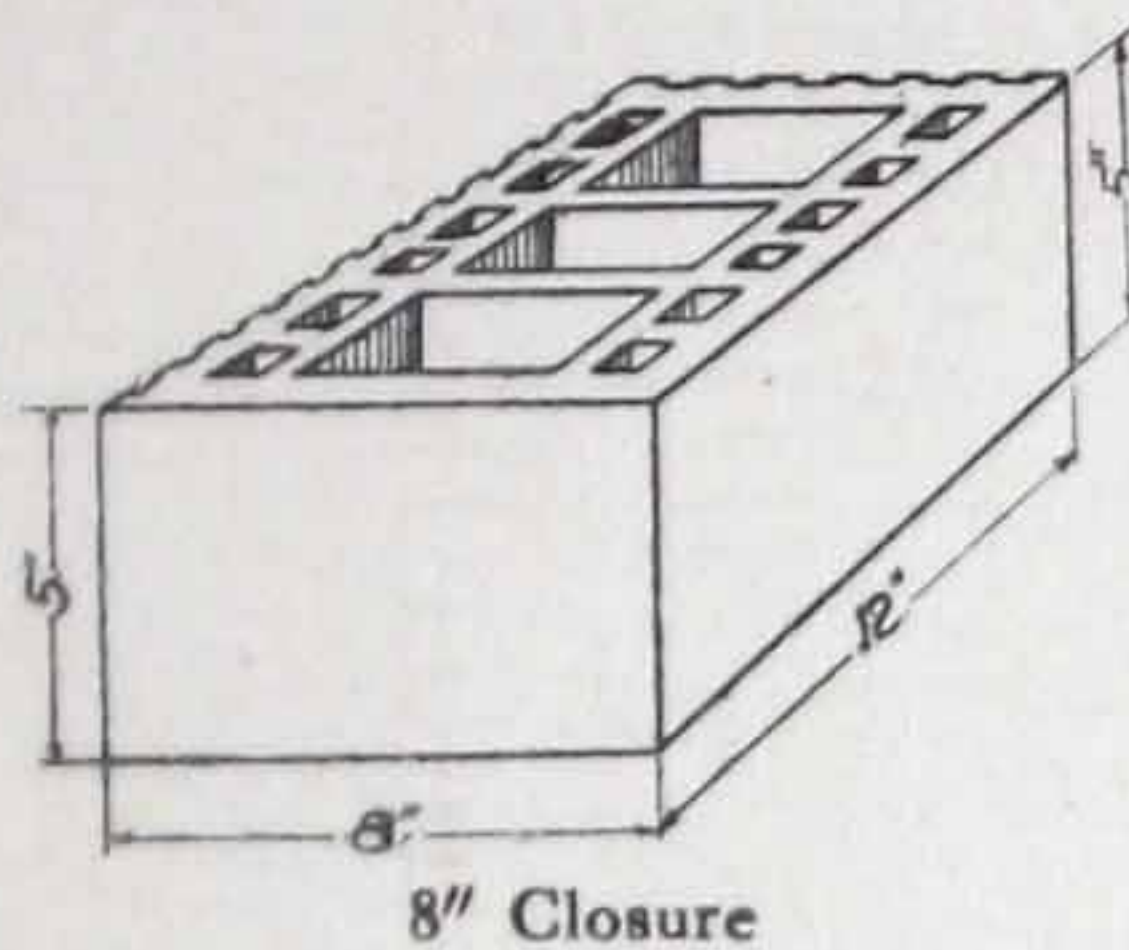
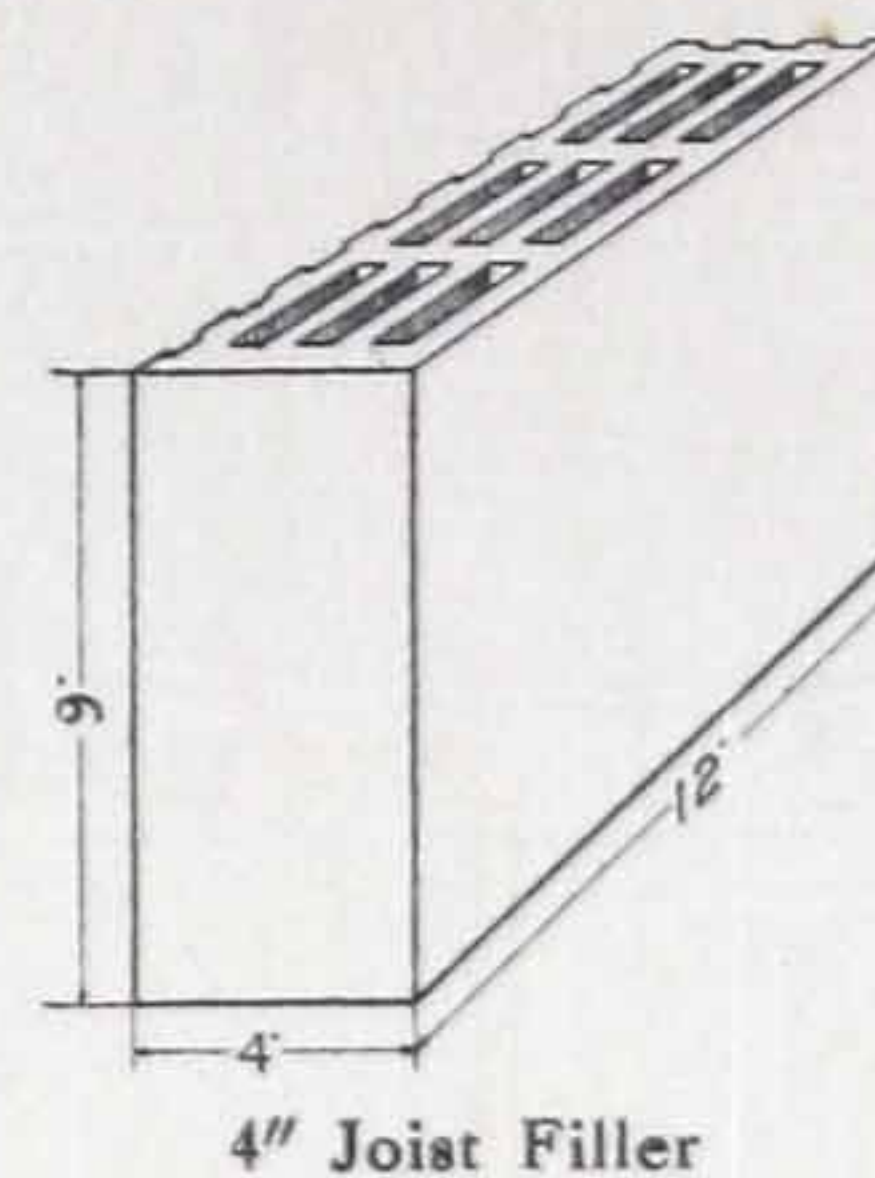
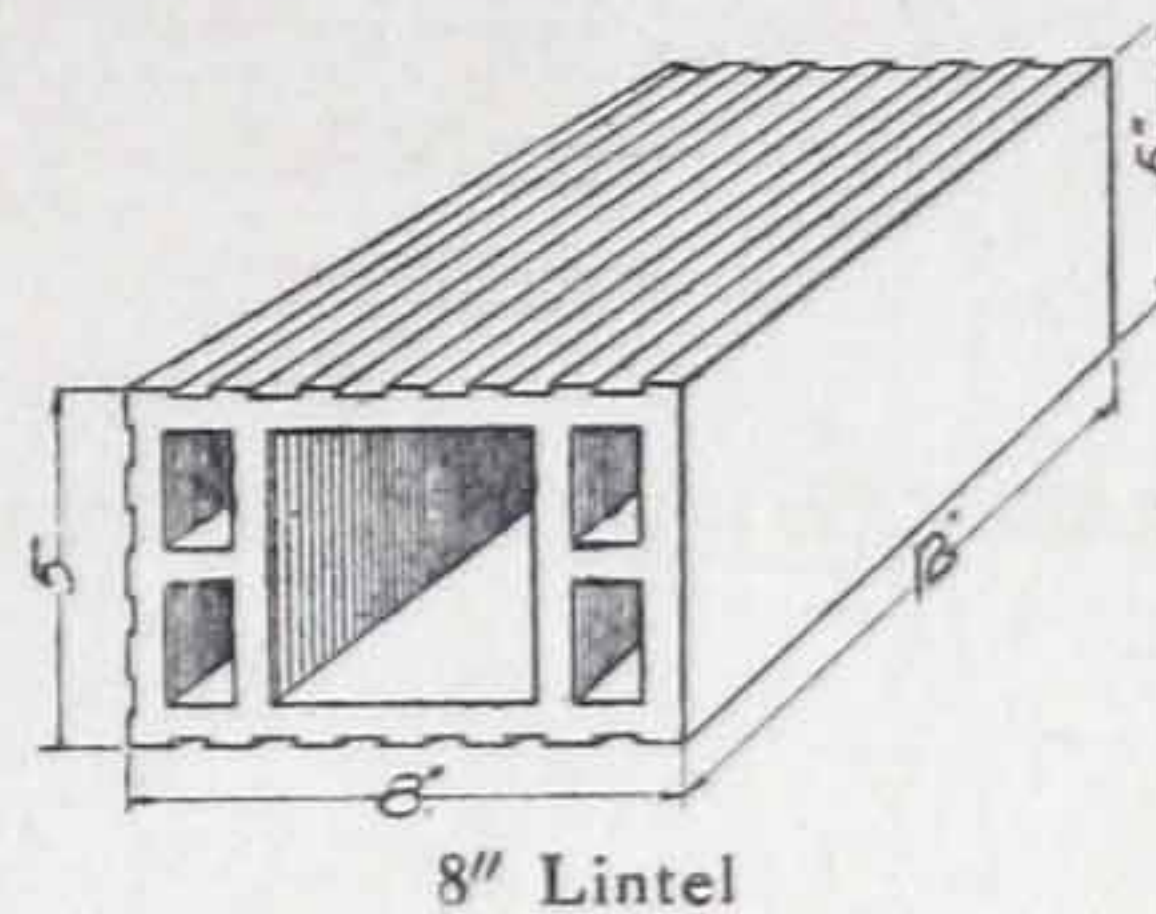
Erected of 8"x12"x12" Natco Hollow Tile; cement stucco plaster and ordinary wall plaster applied directly to the exterior and interior faces of the wall respectively.

Workmen's Homes for Bethlehem Steel Co
Sparrows Point, Md.
Architects, Bissel & Sinkler, Phila., Pa.
8"x12"x5" Natco Hollow Tile furnished and erected by
National Fire Proofing Company, Pittsburgh, Pa.


Thirty Double Houses and Boarding Houses for white mechanics.
Sparrows Point, Md.

Ten Rows of Homes for colored labor. 100 apartments to accommodate 400 men.
Sparrows Point, Md.

8" Wall Tile



CONSTRUCTION DETAILS
OF 8 IN. EXTERIOR WALL
BUILT OF NATCO TILE
WITH A FINISHED FACE
SEE NOTE ABOVE

SCALE FOR ISOMETRIC DRAWING
SCALE FOR SECTIONS 

National Fire Proofing Company

General Offices

Fulton Building, Pittsburgh, Pennsylvania



Branch Offices:

| | |
|------------------------|---------------------|
| CHICAGO | Webster Building |
| NEW YORK | Flatiron Building |
| PHILADELPHIA | Land Title Building |
| BOSTON | Rice Building |
| WASHINGTON | Woodward Building |
| DETROIT | Penobscot Building |

23 Factories in the United States



In Canada:

National Fire Proofing Company of Canada, Ltd.

Toronto

Factory at Hamilton, Ont., Canada